

## **Determination of Public Land (Rangeland) Health for 65082 GILBERT GOMEZ**

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the Gilbert Gomez allotment #65082 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ T. R. KREAGER

Assistant Field Manager

08/10/2004

Date

# Standards of Public Land Health

## Evaluation of 65082 GILBERT GOMEZ Allotment

### [ 05/06/2004 ]

The Roswell Field Office conducted rangeland health assessments at one study site within the Gilbert Gomez Allotment #65082. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65082- GOMEZ #1- D163	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the Gilbert Gomez allotment #65082; 10 of these assessed soil/site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments along with quantitative information from long-term monitoring studies on one study area were utilized to assess the rangeland health of the public land within the allotment. These quantitative evaluations were performed by the Roswell Field office staff starting in the early 1980's. These include ground and vegetative cover and composition, production, frequency, and ecological condition as calculated from these collections which have been scheduled approximately every 5 years.

The recurrent dry conditions have impacted this allotment over the last several years. The study site location is classified as a Shallow SD-3 ecological site; Sandy SD-3 sites occur on the lower areas of the allotment. These sandy sites are dominated by mesquite. Gyp Upland inclusions occur throughout the allotment. No livestock are presently grazing this pasture. Both mule deer and pronghorn inhabit the allotment and immediate vicinity.

The majority of indicators assessed rated None to Slight to Slight to Moderate, except pedestalling, functional/structural groups and invasive plants. All these rate at Moderate. Pedestalling is evident on the slopes and is influenced by precipitation events. Flow patterns are short and stable. Functional/ structural groups also rate Moderate due to the absence of the blue grama and sideoats grama as indicated by the site description and long-term datum indicates an absence of these species. Mesquite is the dominate shrub on the lower sandy sites and in some areas hummocks are occurring; on the upper ridges (shallow sites) cresote appears to be increasing. Herbaceous plant composition and cover appear to be stable throughout the area.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as annual production and invasive plants, as discussed above. Specifically, only two biotic indicators fell within the Moderate rating, Functional/Structural/Groups and Invasive Plants.

In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife Habitat and Population indicators rate Slight to Moderate, primarily for desert mule deer, and a variety of game and non-game terrestrial species, including raptors and migratory birds which may utilize the uplands next to the Pecos River corridor. With respect to special status species, none are known to occur in the area of interest at this time and the habitat and population indicators are, therefore rated None to Slight.

Hydrology - Pasture Gomez #1 - The pedestals and/or terracette indicator rated as moderate. The recent dry conditions in combination with wind and water erosion has possibly decreased the amount of plant cover and possibly decreased infiltration into the soils which may have increased the amount of pedestaling of plants and rocks. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits outcrop in the area.

It is the professional opinion of the Assessment team that this allotment meets the Upland and Biotic standards. Further monitoring of brush encroachment may be warranted; also future vegetation treatments for mesquite and creosote control may improve the potential of these areas within the allotment.

### **Recommendations:**

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65082-GOMEZ #1-D163			
Legal Land Desc	NWNW 5 0140S 0270E Meridian 23	Acreage	843
Ecosite	042CY025NM SHALLOW SD-3	Photo Taken	Y
Watershed	13060007040 DEXTER EAST		
Observers	SPAIN/NAVARRO	Observation Date	05/06/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Te	Soil Taxon Name	TENCEE
Texture Class	NM666 GR-SL	Soil Phase	TENCEE
Texture Modifier	NM666 GRAVELLY SANDYLOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	8.59	NOAA Growing Season Precipitation	6.47
NOAA Avg Annual Precipitation	12.5	NOAA Avg Growing Season Precipitation	10.3
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extrem e	Moderat e to Extreme	Moderat e	Slight to Moderat e	None to Slight
S H	Rills					X
Comments :						
S H	Water Flow Patterns				X	
Comments :						
S H	Pedestals and/or Terracettes			X		
Comments :	on slopes and appears to be driven by ppt events					

S H	Bare Ground				X	
Comments :						
S H	Gullies				X	
Comments :						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments :						
H	Litter Movement				X	
Comments :	some displacement					
S H B	Soil Surface Resistance to Erosion					X
Comments :	interspace soils holding together					
S H B	Soil Surface Loss or Degradation				X	
Comments :						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments :						
S H B	Compaction Layer					X
Comments :						
B	Functional/Structural Groups			X		
Comments :						
B	Plant Mortality/Decadence					X
Comments :						
H B	Litter Amount				X	
Comments :						

B	Annual Production				X	
Comments :						
B	Invasive Plants			X		
Comments :	Scattered mesquite is on the lower parts of the slopes of this site. Mesquite is more common and more of a problem in the drainages and sandy sites.					
B	Reproductive Capability of Perennial Plants					X
Comments :						
S	Physical/Chemical/Biological Crusts				X	
Comments :	Physical crusts- holding well					
B	Wildlife Habitat				X	
Comments :						
B	Wildlife Populations				X	
Comments :						
B	Special Status Species Habitat					X
Comments :	<p>Twenty-two (22) indicators for Rangeland Health were evaluated for the Runyan allotment; 10 of these assessed soil/site stability, 11 assessed hydrologic functions and 13 assessed biotic integrity. These qualitative assessments along with quantitative information from two areas on the allotment were utilized to assess the rangeland health of the public land within the allotment. This allotment is a "C" category (custodial) because of the small amount of public lands within the allotment.</p> <p>While drought over the past three years has had an impact on these sites, the assessments of the indicators range from Moderate down to Slight to None. The exception being the presence of invasive plants (prickly pear) and the amount of bare ground throughout the site. The presence of prickly pear is extensive in both areas but does not appear to be connected with disturbance (at least recent disturbance). Overall the condition of the public lands on the allotment are in a stable state.</p> <p>To some extent the hydrologic function (overland water flow) has been impacted by the increased oil/gas activities and the associated road development in this area.</p>					

	<p>In the professional opinion of the Assessment Team, the public land within the allotment meet the Upland and Biotic Standards. The Riparian Standard does not apply to this area.</p> <p>Twenty-two (22) indicators for Rangeland Health were evaluated for the Runyan allotment; 10 of these assessed soil/site stability, 11 assessed hydrologic functions and 13 assessed biotic integrity. These qualitative assessments along with quantitative information from two areas on the allotment were utilized to assess the rangeland health of the public land within the allotment. This allotment is a "C" category (custodial) because of the small amount of public lands within the allotment.</p> <p>While drought over the past three years has had an impact on these sites, the assessments of the indicators range from Moderate down to Slight to None. The exception being the presence of invasive plants (prickly pear) and the amount of bare ground throughout the site. The presence of prickly pear is extensive in both areas but does not appear to be connected with disturbance (at least recent disturbance). Overall the condition of the public lands on the allotment are in a stable state.</p> <p>To some extent the hydrologic function (overland water flow) has been impacted by the increased oil/gas activities and the associated road development in this area.</p> <p>In the professional opinion of the Assessment Team, the public land within the allotment meet the Upland and Biotic Standards. The Riparian Standard does not apply to this area. None known to occur</p>					
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B	Special Status Species Populations					X
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Comments :	None known to occur					
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### Part 3. Summary

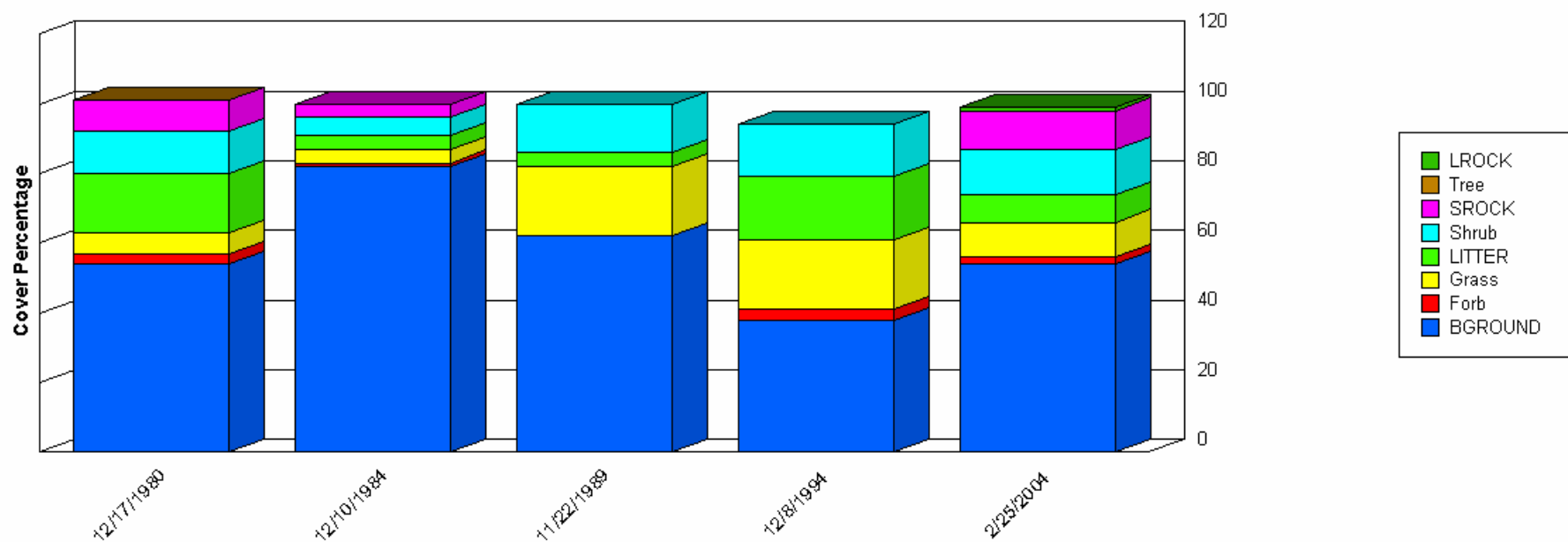
A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	5	4
H	Hydrologic	0	0	1	7	3
B	Biotic	0	0	2	5	6

<p>B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i>, and Slight to Moderate and None to Slight merge to form the <i>Meets</i> columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.</p>				
Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	1	10
Biotic		0	2	11
Site Notes:				



## Ground Cover Trends



	12/17/1980	12/10/1984	11/22/1989	12/8/1994	2/25/2004
BGROUND	54.00	82.00	62.00	38.00	54.00
Forb	3.00	1.00	0.00	3.00	2.00
Grass	6.00	4.00	20.00	20.00	10.00
LITTER	17.00	4.00	4.00	18.00	8.00
LROCK	0.00	0.00	0.00	0.00	1.00
Shrub	12.00	5.00	14.00	15.00	13.00
SROCK	9.00	4.00	0.00	0.00	11.00

	12/17/1980	12/10/1984	11/22/1989	12/8/1994	2/25/2004
Tree	0.00	0.00	0.00	0.00	0.00
Total	101.00	100.00	100.00	94.00	99.00

## Report Parameters

SITE NAME LIKE           65082-GOMEZ #1-D163  
 ON/AFTER                10/01/1980  
 ON/BEFORE              09/30/2004

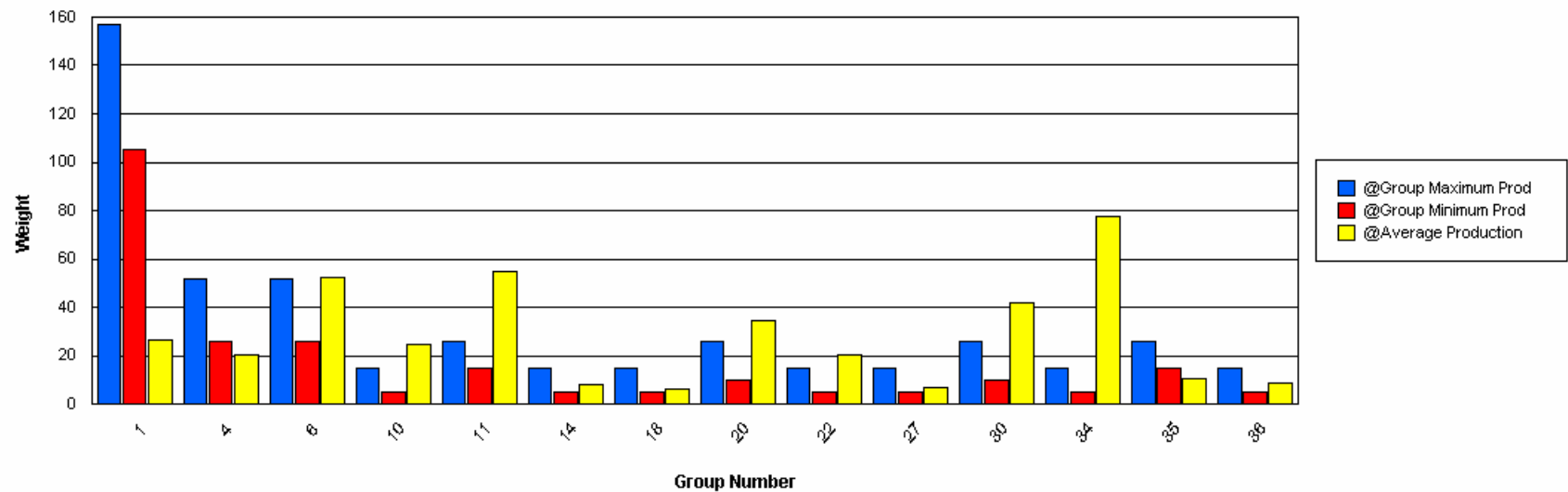
## Functional / Structural Groups

### Report Parameters

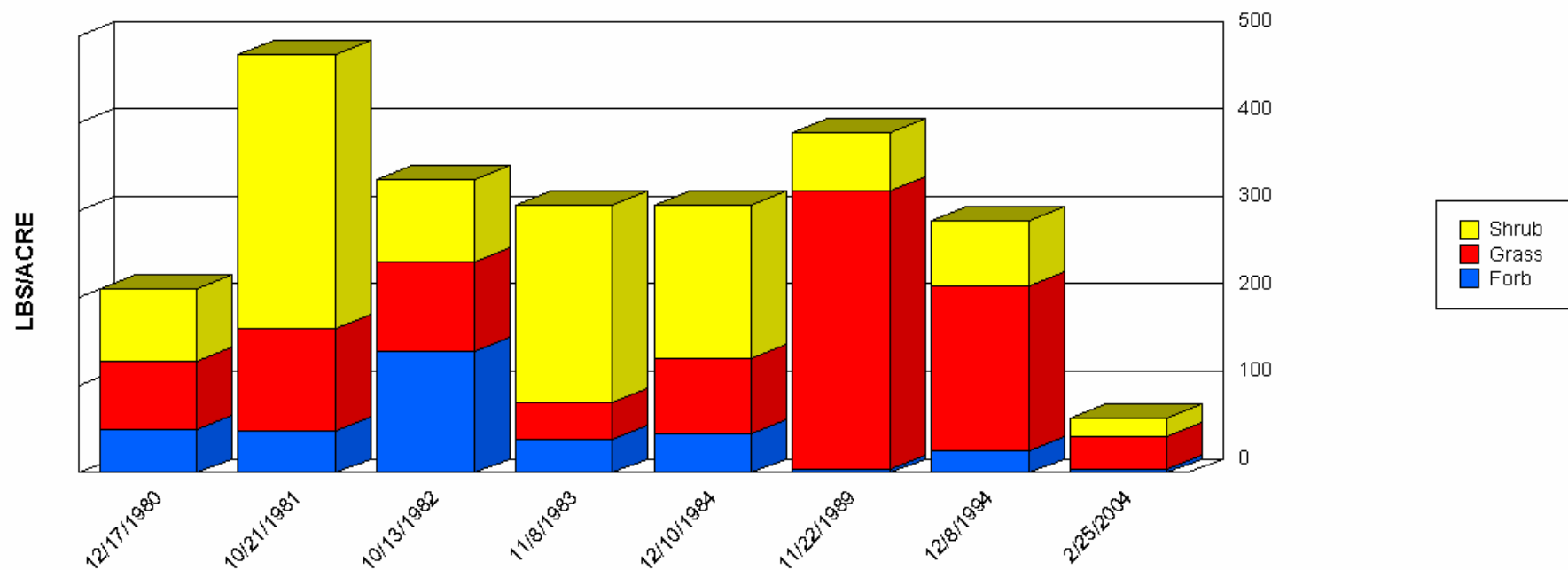
SITE NAME LIKE 65082-GOMEZ #1-D163  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2004  
 MIN LBS TO GRAPH 5  
 SELECTED ECOSITE 042CY025NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOER4	105	157	8.00	56.00	26.40	16.60
4	Grass	MUPO2	26	52	1.15	70.00	20.55	25.04
6	Grass	SPCR	26	52	0.00	91.00	23.49	31.82
6	Grass	SPFL2	26	52	25.00	33.00	29.00	4.00
7	Grass	TRMU	15	26	2.60	7.00	4.80	2.20
10	Grass	ERPU8	5	15	0.00	81.60	24.80	28.99
11	Grass	ARIST	15	26	0.00	85.00	29.09	27.40
11	Grass	SPCO4	15	26	3.00	49.00	26.00	23.00
14	Grass	BOBR	5	15	5.70	11.00	8.35	2.65
18	Forb	LESQU	5	15	1.00	17.64	6.12	6.70
20	Forb	CROTO	10	26	0.33	31.00	14.12	10.86
20	Forb	CRPO5	10	26	0.00	30.74	15.37	15.37
20	Forb	DYAC	10	26	1.65	8.00	4.83	3.17
21	Forb	AAFF	5	15	1.00	14.00	4.85	4.34
22	Forb	DYPE2	5	15	0.00	38.28	13.41	12.19
22	Forb	MELE2	5	15	0.00	21.12	6.81	8.47
27	Shrub	COER5	5	15	6.00	8.00	6.67	0.94
30	Shrub	PRGL2	10	26	2.67	163.20	42.01	48.19
34	Shrub	GUSA2	5	15	4.00	199.68	77.82	71.79
35	Shrub	ATCA2	15	26	1.00	20.00	10.50	9.50
36	Shrub	DAFO	5	15	0.00	18.30	8.94	7.33

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
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## Production Lbs/Acre Trends



	12/17/1980	10/21/1981	10/13/1982	11/8/1983	12/10/1984	11/22/1989	12/8/1994	2/25/2004
Forb	49.00	47.38	138.82	38.82	44.00	4.00	25.00	4.21
Grass	78.00	118.14	103.28	41.24	87.00	318.00	188.00	37.09
Shrub	83.00	313.26	93.36	226.52	176.00	67.00	75.00	21.59
Total	210.00	478.78	335.46	306.58	307.00	389.00	288.00	62.90

### Report Parameters

SITE NAME LIKE 65082-GOMEZ #1-D163  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2004



## Allotment 65082

T14S,R27E

0.4 0 0.4 Miles



### Allotment Boundary

His laboratory is one of the few centers of Latin American research in the country, and he has developed a research focus on the impact of international migration on social and cultural change in the region. He is also studying ELN, Spanish language, and immigration trends in Central and South America. This research is currently being published in a book, *La frontera*.

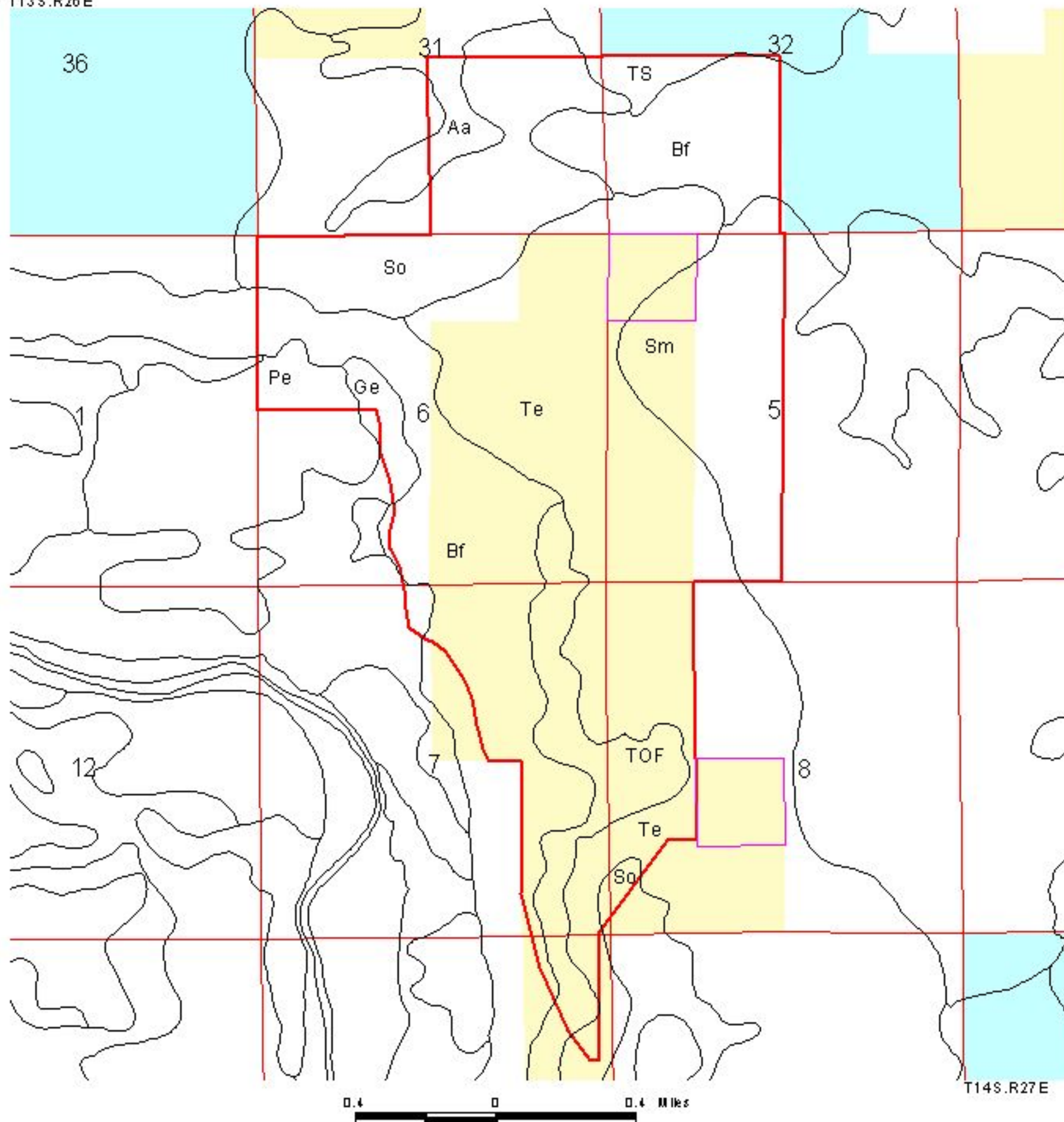


# Rangeland Health Assessment Soil Mapping Units



Allotment 65082

T13S.R26E



Public



State



Study Locations



Private



Study Plots



Pasture Boundary



Soil Mapping Units



Allotment Boundary

Produced by the Roswell Field Office  
GIS Intern on July 2, 2003.

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